TECHNICAL REVIEW DOCUMENT
For
RENEWAL TO OPERATING PERMIT 96OPMR177

Young Gas Storage Company, Ltd. – Young Compressor Station
Morgan County
Source ID 0870051

Prepared by Jacqueline Joyce
August – October 2012
Revised December - November 2012 and January 2013
Revised April 2013 to change the responsible officials

Reviewed by:

Operating Permit Supervisor:	Matt Burgett
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I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The current Operating Permit was issued on August 1, 2006. The expiration date for the permit was August 1, 2011. However, since a timely and complete renewal application was submitted, under Colorado Regulation No. 3, Part C, Section IV.C all of the terms and conditions of the existing permit shall not expire until the renewal Operating Permit is issued and any previously extended permit shield continues in full force and operation. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted July 26, 2010, additional information submitted on February 4, 2011, September 10, October 11 and November 6, 2012, comments on the draft permit and technical review document received on December 19, 2012, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at www.colorado.gov/cdphe/airTitleV. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating

permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

This facility is a natural gas transmission and storage facility as defined under Standard Industrial Classification 4922. The facility consists of three (3) natural gas-fired reciprocating internal combustion engines, a triethylene glycol dehydrator, and a facility flare. The reciprocating engines are used to drive compressors, which compress pipeline quality natural gas for injection into underground storage during off-peak delivery periods or for delivery to pipeline during periods of peak demand. Upon withdrawal, natural gas may be dehydrated by the dehydration unit and/or processed to remove natural gas liquids. The natural gas liquid product is collected, stored in tanks and transported offsite via trucks. The facility flare is used to combust the vent gases from the dehydration unit flash tank and still vent, fuel gas from the pilot light, and natural gas/natural gas liquid vapors from the emergency vent. Vent gases can be routed to the regenerator burner, reducing the burner's natural gas fuel consumption. The facility emits fugitive VOC emissions from equipment leaks.

The facility is located approximately 3.5 miles north of Interstate 76 on County Road 17 in Morgan County. The area in which the plant operates is designated as attainment for all criteria pollutants.

There are no affected states within 50 miles of the plant. There are no Federal Class I designated areas within 100 kilometers of the plant.

The summary of emissions that was presented in the Technical Review Document (TRD) for the previous renewal permit has been modified to update potential to emit. Potential to emit is shown in the table below:

Emission Unit	Potential to Emit (tons/yr)			
	NO_X	CO	VOC	HAPS
Engine – CG-7100	29	36.7	19.4	See Table on Page 16
Engine – CG-7200	29	36.7	19.4	
Engine – CG-7300	29	36.7	19.4	
Dehy/Flare	7.1	38.3	38.8	
Produced Water Tanks (T-5312 & T-5313)[1]			15.7	
Emergency Generator[2]	0.79	0.52	0.10	
Insignificant Heaters[3]	2.24	1.88	0.12	
Total	97.13	150.8	112.92	41.38

[1]Tanks are subject to APEN reporting requirements but are considered insignificant activities per Reg 3, Part C, Section II.E.3.uu. Emissions are based on the information submitted on February 4, 2011.
[2]The emergency generator is included in the insignificant activity list. Emissions are based on design rate, manufacturer's emission factors and 500 hours per year of operation (in accordance with the September 6, 1995 EPA Memo, "Calculating Potential to Emit (PTE) for Emergency Generators").

[3]Emissions are based on design rate, 8760 hours per year of operation and AP-42 emission factors (Section 1.4 (dated 3/98), Tables 1.4-1 and 2). Emission estimate includes all fuel burning equipment (including the equipment in the insignificant activity list).

Potential to Emit indicated in the above table is based on the following information:

Criteria Pollutants

Potential to emit is based on permitted (or requested) emissions for the compressor engines (CG-7100, CG-7200 and CG-7300) and the dehydrator. Emissions from the produced water tank are based on the emission factor determined from the Hysis version 6.0 run included in their July 26, 2010 renewal application and the throughput indicated in the February 4, 2011 additional information submittal. Emissions from the emergency generator are based on manufacturer's emission factors, design rate and 500 hrs/yr of operation (in accordance with the September 6, 1995 EPA Memo, "Calculating Potential to Emit (PTE) for Emergency Generators"). Emissions from the insignificant heaters are based on design rate, AP-42 emission factors (Section 1.4, dated 3/98, Tables 1.4-1 thru -3) and 8760 hrs/yr of operation.

Hazardous Air Pollutants (HAP)

The breakdown of HAP emissions by emission unit and individual HAP is provided on page 16 of this document. As indicated in the footnotes for the table on page 16, HAP PTE was determined as follows:

Engines CG-7100, CG-7200 and CG-7300: HAP emissions are based on design rate, permitted annual hours of operation (or 8760 hrs/yr) and the most conservative emission factor from AP-42 or HAPCalc 2.0. Note that the HAPCalc 2.0 factors are not significantly different from the HAPCalc 3.0 factors.

Dehydrators: HAP emissions are based on the GLYCalc run used to set the permit limits.

Produced Water Tanks: HAP emissions are based on the hydrocarbon emission factor determined from the Hysis version 6.0 and the HAP mass fraction determined from the analysis submitted with the July 29, 2010 renewal application and the requested throughput indicated in the February 4, 2011 additional information submittal.

Emergency generator (EG-1): HAP emissions are based on AP-42 emission factors (Section 3.2, dated 7/00, Table 3.2-2), design rate and 500 hours per year of operation (in accordance with the September 6, 1995 EPA Memo, "Calculating Potential to Emit (PTE) for Emergency Generators").

Insignificant Heaters: HAP emissions are based on AP-42 emission factors (Section 1.4, dated 3/98, Table 1.4-3), design rate and 8760 hour per year of operation.

Actual Emissions

Even though actual emissions are typically much less than permitted emissions, the source usually reports permitted emissions as actual emissions, which is an acceptable practice; therefore actual emissions are not shown in the above table summarizing emissions.

National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories

As indicated in the above summarizing emissions, the facility is a major source for HAPS and may be subject to NESHAPs for specific source categories (hereafter, referred to as "MACT requirements"). The applicability of various MACT requirements were discussed to some extent in the technical review document prepared to support the first renewal of this permit (issued August 1, 2006). That discussion has been updated to reflect changes to the various MACT standards and the promulgation of any new standards that may apply.

Natural Gas Transmission and Storage (NGTS) Facility MACT (40 CFR Part 63 Subpart HHH)

The provisions in 40 CFR Part 63 Subpart HHH apply to glycol dehydrators located at major sources of HAPs. Under the initial rules, as long as actual emissions of benzene are less than 0.9 megagrams per year (1,984 lbs/yr), then only recordkeeping requirements apply. The recordkeeping requirements are included in the current permit. EPA signed off on final revisions to the provisions in 40 CFR Part 63 Subpart HHH on April 17, 2012, which were published in the Federal Register on August 16, 2012 and these revisions impose BTEX limits on glycol dehydrators that were formerly exempt (i.e. dehydrators with actual benzene emissions less than 0.9 megagrams (1,984 lbs) or 283,000 standard cubic meters per day (10.0 MMscf/day)). The formerly exempt glycol dehydrators are considered small glycol dehydrators and existing (commence construction before August 23, 2011) small glycol dehydrators have three years from the effective date of the rule to comply with the requirements. The appropriate requirements will be included in the permit and are discussed in more detail later in this document.

Reciprocating Internal Combustion Engines (40 CFR Part 63 Subpart ZZZZ)

The reciprocating internal combustion engine (RICE) MACT was signed as final on February 26, 2004 and was published in the Federal Register on June 15, 2004. Under this rulemaking only RICE that were > 500 hp and located at major sources of HAPS were subject to the requirements. Subsequent revisions were made to the RICE MACT to address new engines $\leq$ 500 hp located at major sources and new engines of all sizes at area sources (final rule published January 18, 2008), existing compression ignition engines $\leq$ 500 hp at major sources and all sizes at area sources (final rule published March 3, 2010) and existing spark ignition engines $\leq$ 500 hp at major sources and all sizes at area sources (final rule published August 20, 2010). Revisions were made to

the RICE MACT on January 30, 2013. The January 30, 2013 revisions did not change the applicability requirements but did change the specific requirements for some engines (e.g. engines greater than 500 hp located at area sources of HAPs).

As discussed in the technical review document for the first renewal permit (issued August 1, 2004), the compressor engines (CG-7100, CG-7200 and CG-7300) are existing (commenced construction prior to December 19, 2002) 4-stroke lean burn engines > 500 hp and are not required to meet the requirements in 40 CFR Part 63 Subparts A and ZZZZ, including the initial notification requirements (see § 63.6590(b)(3)(ii)).

There is one natural gas-fired emergency generator included in the insignificant activity list and this engine has been in the list since the Title V permit was initially issued on May 1, 1999, so it would qualify as existing engine (construction commenced prior to December 19, 2002). The source submitted information on September 10, 2012 indicating that the engine was ordered May 1994 and is greater than 500 hp. As provided for in 40 CFR Part 63 Subpart ZZZZ § 63.6590(b)(3)(iii) this engine is exempt from the requirements of Subparts ZZZZ and A, including the initial notification requirements.

Organic Liquid Distribution (Non-Gasoline) MACT (40 CFR Part 63 Subpart EEEE)

The applicability of this MACT to the Young Compressor Station is as discussed in the technical review document prepared for the first renewal permit (issued August 1, 2006). Under 40 CFR Part 63 Subpart EEE §§ 63.2334(c)(2), organic liquid distribution operations do not include activities and equipment at NGTS facilities; therefore, the organic liquid distribution MACT requirements do not apply.

Boiler MACT for Major Sources (40 CFR Part 63 Subpart DDDDD)

EPA promulgated National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters on March 21, 2011. These requirements apply to boilers and process heaters that are located at major sources of HAPs and as such these requirements apply. There is no de minimis level specified in the requirements and there is fuel-burning equipment identified in the insignificant activity list that is potentially subject to these requirements. Since all of the fuel-burning equipment at the facility only burns natural gas, only work practice standards (i.e., boiler tune-ups) apply. As a result the heaters that are subject to Boiler MACT requirements will be removed from the insignificant activity list and included in Section II of the permit.

EPA proposed revisions to the Boiler MACT on December 23, 2011 and final revisions to the Boiler MACT were published in the Federal Register on January 31, 2013. The January 31, 2013 final rules have no affect on the applicability of the Boiler MACT to the boilers and process heaters at this facility.

New Source Performance Standards (NSPS)

EPA has promulgated NSPS requirements for new source categories since the issuance of the first renewal permit for this facility. NSPS requirements generally only apply to new or modified equipment and the Divisions is not aware of any modifications to existing equipment or additions of new equipment that would render equipment at this facility subject to NSPS requirements. However, because the recently promulgated NSPS requirements address equipment that may not be subject to APEN reporting or minor source construction permit requirements, the applicability of some of the newly promulgated requirements are being addressed here.

NSPS Subpart JJJJ – Stationary Spark Ignition Engines

NSPS Subpart JJJJ applies to stationary spark ignition engines that commenced construction, reconstruction or modification after June 12, 2006 and were manufactured after specified dates. The date the engine commenced construction is the date the engine was ordered by the owner/operator. The compressor engines commenced operation in 1994 and there is no indication that these units have been modified. As discussed under the RICE MACT, the emergency generator commenced construction (on-site construction) prior to June 12, 2006. Therefore, the requirements in NSPS Subpart JJJJ do not apply to any of the engines at this facility.

NSPS Subpart IIII – Stationary Compression Ignition Engines

NSPS Subpart IIII applies to stationary compression ignition engines that commenced construction, reconstruction or modification after July 11, 2005 and were manufactured after specified dates. The date the engine commenced construction is the date the engine was ordered by the owner/operator. There are no compression ignition engines located at the Young Compressor Station, therefore, the requirements in NSPS Subpart IIII do not apply.

NSPS Subpart OOOO – Crude Oil and Natural Gas Production, Transmission and Distribution

The provisions in NSPS Subpart OOOO apply to several affected facilities at crude oil and natural gas production, transmission and distribution facilities that commenced construction, modification or reconstruction after August 23, 2011. The affected facilities under NSPS OOOO include gas wells, compressors (centrifugal and reciprocating), pneumatic controllers, storage vessels, equipment leaks associated with process units (i.e., equipment used to extract natural gas liquids from field gas) and sweetening units located at onshore natural gas processing plants. In the first case, the facility commenced operation in 1994 and it is not apparent that any equipment at the facility was constructed, reconstructed or modified after August 23, 2011; however, the Division has reviewed the potential applicability with respect to the individual affected facilities.

The pneumatic controllers and compressors are only affected facilities if they are located between the wellhead and the natural gas transmission and storage segment. Since this facility is a natural gas storage facility (hence part of the natural gas transmission and storage segment), any compressors or pneumatic controllers are not affected facilities, regardless of when they were constructed, reconstructed or modified.

Under the rule, gas wells are defined as "an onshore well drilled principally for production of natural gas". While gas may be injected into wells at the Young Compressor Station for storage, the wells are for storage of pipeline quality natural gas, not for production of natural gas. Therefore, there are no wells at this facility that meet the definition of "gas well" under Subpart OOOO.

Equipment associated with process units and sweetening units located at onshore natural gas processing plants are affected facilities under Subpart OOOO. There are no sweetening units at this facility. Process units extract natural gas liquids from field gas, so essentially a process unit is what makes a facility an onshore natural gas processing plant. The technical review document prepared for the first renewal (issued August 1, 2006), discussed the fact that although this facility contains equipment that extracts natural gas liquids from natural gas, the facility is not a gas processing plant because liquids are not extracted from field gas but from pipeline quality natural gas that absorbs hydrocarbons during storage. The Young Compressor Station is a natural gas storage facility and not a gas plant; therefore, any process unit at this facility is not an affected facility, regardless of when it was constructed, reconstructed or modified.

Any storage vessels with VOC emissions greater than or equal to 6 tons/yr of VOC that commenced construction, reconstruction or modification after August 23, 2011 would be an affected facility and would be subject to the requirements in Subpart OOOO. While there are a number of storage vessels included in the insignificant activity list in the permit, these tanks have been included in the permit since it was first issued May 1, 1999. Therefore they don't meet the applicability date (i.e. commenced construction, reconstruction or modification after August 23, 2011) and they are not affected facilities.

In summary, there are no Subpart OOOO affected facilities located at the Young Compressor Station so the requirements in Subpart OOOO do not apply.

Compliance Assurance Monitoring (CAM) Requirements

In the technical review document for the first renewal of this permit (issued August 1, 2006), the Division indicated that CAM did not apply to the compressor engines (CG-7100, CG-7200 and CG-7300) at this facility, since none of these engines are equipped with a control device.

Although a flare is used to control emissions from the glycol dehydrator, as discussed in the technical review document to support the first renewal (issued August 1, 2006), because the original Title V permit specified a continuous compliance determination method, the dehydrator was exempt from CAM as specified in 40 CFR Part 64 § 64.2(b)(vi).

As a result the applicability of CAM to the equipment at this facility has not changed since the first renewal (issued August 1, 2006). CAM does not apply to any emission unit at this facility.

Greenhouse Gas Emissions

The potential-to-emit of greenhouse gas (GHG) emissions from this facility is less than 100,000 TPY CO_2e. Future modifications greater than 100,000 TPY CO_2e may be subject to regulation (Regulation No. 3, Part A, I.B.44).

III. Discussion of Modifications Made

Source Requested Modifications

The source's requested modifications were addressed as follows:

July 26, 2010 Renewal Application

The only change requested in the renewal application was to remove two produced water tanks from the insignificant activity list in Appendix A and include them in Section II of the permit as significant emission units. The reason given in the application for this was that emissions from the produced water tanks exceed the APEN de minimis level.

Produced water storage tanks containing less than 1 percent by volume crude oil (on an annual average) are exempt from minor source construction permit requirements and can be considered insignificant activities in the Title V permit. The source indicated that in their September 10, 2012 submittal that these tanks do meet the produced water insignificant activity / minor source construction permit exemptions, so these tanks will remain in the insignificant activity list. A note was added to the insignificant activity list to indicate that the tanks are subject to APEN reporting requirements and when the most recent APEN was submitted.

February 4, 2011 Additional Information Submittal

The February 4, 2011 additional information requested a change in requested throughput and emission limits for the produced water tanks. As discussed above, the source submitted information on September 10, 2012 indicating that the produced water tanks meet the insignificant activity / minor source construction permit exemption requirements and so they will remain in the insignificant activity list.

December 19, 2012 Comments on the Draft Permit and Technical Review Document

In their December 19, 2012 comments on the draft permit and technical review document the source requested changes to the glycol dehydrator language specifically that language indicating that emissions from emergency blowdowns were route to the

flare. According to the source, emissions from emergency blowdowns are not vented to the flare but they are infrequent and would more appropriately be considered an insignificant activity. The source also noted that the flare is equipped with a flow meter, so any process gases route to the flare can be determined by the flare flow meter. The following changes were made to the permit based on the source's comments:

Section I, Condition 1.1

- Removed the language in Condition 1.1 that states that gases from the emergency vent are routed to the flare.

Section II, Condition 2.2.4

- The language in Conditions 2.2.4 and 2.2.4.2 were revised to remove references to emergency blowdowns.

Section II, Condition 2.4

- The language in Conditions 2.4 and 2.4.1 were revised to remove references to emergency blowdowns.

- The language in Condition 2.4.2 was revised to indicate that the quantity of dehydrator flash tank and still vent gases would be determined using the flare flow meter.

Appendix A – Insignificant Activity List

- Added station emergency blowdowns to the insignificant activity list.

Other Modifications

In addition to the source requested modifications, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments to the Young Compressor Station Renewal Operating Permit. These changes are as follows:

Page Following Cover Page

- Revised the responsible officials and permit contact.

- Monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on permit issuance date. Note that the source may request to keep the same

monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).

Section I – General Activities and Summary

- Condition 1.1 was revised to indicate that a small boiler and two (2) process heaters are now included in Section II of the permit.

- Condition 1.4 was revised to remove Section IV, Condition 3.d as a state-only requirement, since EPA approved these provisions into Colorado's SIP effective October 6, 2008.

- Revised Condition 2 to include the most recent version of the AOS for permanent and temporary engine replacement.

- Made minor revisions to the language in Condition 3.1 to be more consistent with other permits.

- The following changes were made to the table in Condition 6.1:

    - Added a column for the startup date of the equipment.

    - Combined the emission unit no. and facility id columns.

    - The second column was labeled AIRS point number as that is more appropriate.

    - Added the fuel burning equipment (a boiler and two process heaters) that is subject to the requirements of 40 CFR Part 63 Subpart DDDDD and was previously included in the insignificant activity list.

Section II.1 – Compressor Engines

- On December 12, 2008, the Colorado Air Quality Control Commission (AQCC) adopted revisions to Colorado Regulation No. 7 to include state-wide requirements for existing (constructed or modified before February 1, 2009) internal combustion engines greater than 500 hp. These requirements are set forth in Reg 7, Section XVII.3. Specifically these engines are required to install oxidation catalysts per Section XVII.3.b.(i). However, Section XVII.3.b.(ii) specifies that sources that could demonstrate that the retrofit cost was more than $ 5,000/ton were exempt from the requirements, provided the demonstration was submitted by August 1, 2009. The source requested an exemption from the control requirements from these engines and Division granted the exemption in a letter dated December 21, 2009. Therefore the Reg 7 control requirements do not apply and have not been included in the permit.

- As discussed previously, since these are existing (commenced construction prior to December 19, 2012) RICE located at a major source of HAPS, they are not subject to requirements under 40 CFR Part 63 Subpart ZZZZ.

- The portable monitoring language in Condition 1.1.2 was revised to reflect the current language. Note that this change includes minor changes to the language in Condition 1.1.1.

Section II.2 – Dehydrator with Flare

- On December 12, 2008, the Colorado AQCC adopted revisions to Colorado Regulation No. 7 to include state-wide requirements for oil and gas operations. These requirements are included in Colorado Regulation No. 7, Section XVII and include requirements for glycol dehydrators with actual uncontrolled VOC emissions above 15 tons/yr. The 15 tons/yr actual emission threshold is based on emissions from all glycol dehydrators on site combined. However, these requirements do not apply to glycol dehydrators located at natural gas storage facilities. Therefore, the requirements in Colorado Regulation No. 7, Section XVII.D do not apply to the glycol dehydrators at this facility.

- The language in Condition 2.2.4 was reformatted to more clearly indicate the requirements that apply. In addition, language was added to address periods when the flare is not operating.

- Language was added to Condition 2.7.2 to require that emissions be estimated for periods when the flare is not operated but emissions are routed to it.

- Removed the initial performance test requirements in Condition 2.8 since the test has been completed.

- The Natural Gas Transmission and Storage MACT language in Condition 2.9 has been revised to reflect the revisions to 40 CFR Part 63 Subpart HHH that were published in the Federal Register on August 16, 2012.

  Note that under the revisions to Subpart HHH, the unit is subject to a unit specific BTEX emission limitation. Compliance with the unit specific emission limitation may be met by connecting the process vent to a control device through a closed vent system, process modifications, combination of process modifications and control device and actual uncontrolled emissions. Since the dehydrator currently uses a control device (flare) and closed vent system, this control option was included in the permit.

  According to § 63.1282(d)(1), the flare is exempt from the performance test requirements in § 63.1282, with the exception of § 63.1282(d)(2), therefore, the Division has assumed that the compliance requirements in § 63.1282(e) do not apply. This makes sense, since the provisions of § 63.1282(e) address establishing minimum or maximum operating parameters, calculating daily averages of parameter values and assessing compliance with the daily parameter value and for

flares, the source is only required to monitor the presence of a flame. Therefore, the provisions in § 63.1282(e) have not been included.

There are some requirements related to inspection and monitoring (§ 63.1283) that don't appear to be applicable to a source that uses a flare as a control requirement, yet the language in the rule does not appear to specifically exempt them. The Division has addressed these requirements as follows:

- § 63.1283(d)(1)(i) - § 63.1283(d)(1) specifically exempts flares from the requirements in (d)(4) and (5), which specifies that data from the monitor be used to calculate daily averages and set minimum or maximum operating parameters. In revisions to Subpart HHH (published in the June 29, 2001 Federal Register), EPA stipulated that flares do not have to calculate daily averages and set minimum or maximum operating parameters. Specifically EPA said the following (66 FR 34550, third column, paragraph 4):

  > Flare monitoring devices cannot calculate a daily average or a minimum or maximum operating value because they merely indicate that the pilot flame is either on or off. Therefore, today's action adds language to §§ 63.773(d) and 63.1283(d) clarifying that flares are exempt from calculating daily averages and minimum or maximum operating values.

  63.1283(d)(1)(i) stipulates that data values be measured every hour or that block averages be calculated for every 1-hour period. Based on EPA's above statement it seems apparent that data values aren't measured every hour and that hourly averages cannot be calculated, the monitor just indicates whether the flare is on or off. Therefore, the requirements in 63.1285(d)(1)(i) have not been included in the permit.

- The language in 63.128(d)(6) regarding the monitoring of more than one parameter was removed, since only one parameter (the presence of a flame) is monitored for the flare.

- Excursions are defined in § 63.1283(d)(6)(i) through (v) and only the excursions in § 63.1283(d)(6)(ii) and (iv) were considered applicable. Since daily averages of monitored parameters cannot be calculated for flares the provisions in 63.1283(d)(6)(i) were not included. The provisions in 63.1283(d)(6)(iii) (condensers) and (iv) (control devices tested by the manufacturer) are clearly not applicable to the flare.

<u>"New" Section II.3 – Boilers and Process Heaters</u>

Since the facility is a major source for HAP emissions the equipment at this facility is subject to the Boiler MACT requirements. There are no boilers and process heaters included in Section II of the current permit but as indicated previously, there is no de minimis level for affected facilities under the Boiler MACT. Therefore, any boilers or

process heaters identified in the insignificant activity list would be subject to the Boiler MACT requirements.

In their September 10, 2012 submittal, the source identified a boiler and two process heaters that would be subject to the Boiler MACT requirements. The affected sources for the Boiler MACT include the HMO hot oil heater (4 MMBtu/hr), the heater treater (0.283 MMBtu/hr) and the Parker boiler (0.2274 MMBtu/hr) and these units have been removed from the insignificant activity list and included in "new" Section II.3 of the permit.

The source submitted information on October 11, 2012 indicating that the HMO heater heats oil that is circulated through a heat exchanger in the glycol reboiler to regenerate the glycol. Under the provisions of 40 CFR Part 63 Subpart DDDDD § 63.7491(h), any boiler or process heater that is part of the affected source subject to another subpart under Part 63 is not subject to the requirements in Subpart DDDDD. Glycol dehydrators are subject to requirements under 40 CFR Part 63 Subpart HHH. Although the HMO heater heats oil that is used in the glycol reboiler to regenerator glycol, the HMO heater is not part of the glycol dehydrator, it is a separate emission that could potentially heat oil for some other purpose. Therefore, the Division considers that the HMO heater is subject to the requirements in Subpart DDDDD and does not qualify for the exemption in § 63.7491(h).

In their September 10, 2012 submittal, the source also identified several other heaters that qualify as insignificant activities and asked that they be included in the insignificant activity list. These heaters included a hot water heater, shop heater, an AC unit heater and several catalytic heaters. As defined in Subpart DDDDD § 63.7575, the primary purpose of a process heater is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material for use in a process unit and the catalytic heaters do not meet the definition of process heaters. In addition, the definition of process heaters does not include units used for comfort or space heat, which excludes the shop and AC unit heater. Finally, a hot water heater was identified as an insignificant activity but in accordance with § 63.7491(d) hot water heaters are not subject to the requirements in Subpart DDDDD.

EPA proposed revisions to the Boiler MACT on December 23, 2011 and final revisions were published in the Federal Register on January 31, 2013. The January 31, 2013 final rules have no affect on the applicability of the Boiler MACT to the boilers and process heaters at this facility.

The small boiler and process heaters are subject to the following applicable requirements:

- Except as provided for below, visible emissions shall not exceed 20% opacity (Reg 1, Section II.A.1)

- Visible emissions shall not exceed 30% opacity, for a period or periods aggregating more than six (6) minutes in any sixty (60) minute period, during fire building,

cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment (Reg 1, Section II.A.4)

Based on engineering judgment, the Division believes that the operational activities of fire building, cleaning of fire boxes and soot blowing do not apply to these units. In addition, since these units are not equipped with control equipment the operational activities of adjustment or occasional cleaning of control equipment also do not apply to these units. Process modifications and startup may apply to these units, however, based on engineering judgment, the Division believes that such activities would be unlikely to occur for longer than six minutes. Therefore, the 30% opacity requirement has not been included in the operating permit.

- Particulate matter emissions shall not exceed the following limitations:
  - For units > 1 MMBtu/hr (hot oil heater (HMO)) not to exceed $0.5(FI)^{-0.26}$ lbs/MMBtu, where FI is the fuel input in MMBtu/hr (Reg 1, Section III.A.1.b).
  - For units $\leq$ 1 MMBtu/hr (heater treater and boiler) not to exceed 0.5 lb/MMBtu (Reg 1, Section III.A.1.a)
- Boiler MACT requirements (40 CFR Part 63 Subpart DDDDD), which include the following:
  - Energy assessment
  - Boiler tune-ups

Since these units are not subject to APEN reporting or minor source construction permit requirements, the permit will not include any requirements for calculating emissions.

Section III – Permit Shield

- Corrected the justification for the permit shield for the requirements in 40 CFR Part 63 Subparts K, Ka and Kb.

  Tanks T-5312 and T-5313 are above the applicability threshold (75 cubic meters), but the source submitted information on November 6, 2012 indicating that the vapor pressure of the tank contents are below 15 kPa. Therefore, the tanks are not subject to the requirements in NSPS Kb under the provisions in § 60.110b(b).

Section IV – General Conditions

- Added a version date.
- The paragraph in Condition 3.d indicating that the requirements are state-only has been removed, since EPA approved these provisions into Colorado's SIP effective October 6, 2008.

- The title for Condition 6 was changed from “Emission Standards for Asbestos” to “Emission Controls for Asbestos” and in the text the phrase “emission standards for asbestos” was changed to “asbestos control”

- Condition 29 (VOC) was revised primarily to add the provisions in Reg 7, Section III.C as paragraph e although other minor language and format changes were made.

Appendices

- The following changes were made to the insignificant activity list in Appendix A:
    - Additional information regarding the emergency generator (i.e. model number, size and heat duty) was added to the description.
    - Insignificant category descriptions were added, equipment grouped under the appropriate category and those categories for which records should be available to verify insignificant activity status were noted.
    - Additional fuel-burning equipment was added to the list in accordance with the source’s September 10, 2012 additional information submittal.
    - HE-5008 was removed from the insignificant activity list per the source’s September 10, 2012 submittal (it’s a heat exchanger, it utilizes hot water from the small boiler, not fuel burning equipment)
    - Removed the HMO heater and heater treater burner (V-5207) and included them in Section II of the permit since these units are subject to requirements in 40 CFR Part 63 Subpart DDDDD.

- The tables in Appendices B and C were revised to include the fuel burning equipment subject to the requirements in 40 CFR Part 63 Subpart DDDDD.

- Changed the Division contact for reports in Appendix D.

- Cleared the table in Appendix F.

Hazardous Air Pollutant Emissions

Unit	HAP Emissions (tons/yr)									
	acetaldehyde	acrolein	benzene	toluene	ethyl benzene	xylene	formaldehyde	n-hexane	methanol	**total**
CG-7100	5.49E-01	3.86E-01	1.00E-01	5.19E-01		2.70E-02	4.44E+00	7.29E-02	1.64E-01	6.26E+00
CG-7200	5.49E-01	3.86E-01	1.00E-01	5.19E-01		2.70E-02	4.44E+00	7.29E-02	1.64E-01	6.26E+00
CG-7300	5.49E-01	3.86E-01	1.00E-01	5.19E-01		2.70E-02	4.44E+00	7.29E-02	1.64E-01	6.26E+00
Dehy / Flare			3.75E+00	6.78E+00	3.78E+00	5.00E+00		1.60E-01		1.95E+01
Fugitive VOCs			1.60E-04	2.83E-04	2.18E-04			8.85E-04		1.55E-03
Emergency Generator	1.03E-02	6.33E-03	5.42E-04	5.03E-04	4.89E-05	2.27E-04	6.50E-02	1.37E-03	3.08E-03	8.74E-02
Produced Water Tanks			2.03E+00	7.94E-01	1.69E-02	5.92E-02		1.01E-01		3.00E+00
Insignificant Fuel Burning Equipment			4.71E-05	7.63E-05			1.68E-03	4.04E-02		4.22E-02
Total	1.66	1.16	6.08	9.13	3.80	5.14	13.39	0.52	0.50	41.38

Engine emissions are based on most conservative emission factor (from AP-42 and HAPCalc 2.0, for 4-cycle rich burn engines and/or 4-cycle lean/clean burn) for each pollutant

Dehy emissions from GLYCalc run used to set permit limits.
Fugitive VOC emissions are based on the information submitted on March 6, 2006 to support the first renewal (issued 8/1/06). VOC emissions were below the APEN deminimis level (2 tpy), HAPs are based on the HAP levels indicated in the gas analysis included with the March 6, 2006 submittal.

Emissions from the emergency generator are based on 500 hrs/yr of operation (per 9/6/95 EPA memo), design rate and AP-42 emission factors (Section 3.2 (dated 7/00), Table 3.2-2)

Produced water tanks include Tanks T-5312 and T-5313 and emissions are based on the information submitted February 4, 2011. Based on 15 MMgal/yr of produced water.

Emissions from the insignificant heaters are based on design rate, 8760 hrs/hr of operation and AP-42 emission factors (Section 1.4 (dated 3/98), Table 1.4-3).